

Application No. 10/039,947  
SD-6858 Moore

## REMARKS

### Status of the Claims

- Claims 2-30, 32-37, 39-43, 46-54, and 56-65 are pending.
- Claims 1, 31, 38, 44, 45, and 55 are cancelled.
- Claims 2-22, 24, 25, 27-30, 33-37, 39-43, 46-52, 54 and 56-65 are allowed.
- Claims 23, 26, 32, and 53 are rejected.

### Amendments to the Claims

- Claims 23 and 32 are currently amended.
- New claim 63 is added.

## Allowable Claims

Applicants gratefully acknowledge the allowance of claims 2-22, 24, 25, 27-30, 33-37, 39-43, 46-52, 54 and 56-65.

## Rejected Claims

### Rejected Claims 23, 26, 53

Claim 23 was rejected under 35 USC 102(b) as being anticipated by Schuster et al. (US patent 5,2114,592).

In response, applicants have amended claim 23 to replace the word "disposed" with "coated". Amended claim 23 now recites that the magnesium hydroxide is **coated on the surface of a carrier particle**. Support for this change can be found in the specification at page 10, lines 17-18.

*"Alternatively, the MgO or Mg(OH)<sub>2</sub> sorbent material can be coated onto a carrier or substrate particle, such as sand or glass microspheres."*

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Shuster et al. do not teach or suggest using a carrier particle **coated** on its surface with MgO or Mg(OH)<sub>2</sub> sorbent material. Since Shuster et al. do not teach all of the elements of claim **23**, as currently amended, the rejection under 35 USC 102(b) is improper and should be withdrawn.

Accordingly, claim **23** is now in condition for allowance.

Claims **26** and **53** both depend from claim **23**. Since claim **23** is now in condition for allowance, it follows that dependent claims **26** and **53** are also in condition for allowance.

#### Rejected Claim 32

Claim **32** was rejected under 35 USC 102(b) as being anticipated by either Galbacs et al. publication or by Schuster et al.

In response, applicants have amended claim **32** to recite that the water has a **significant concentration of carbonate, greater than 150 ppm**; that the contact time is **greater than 2 minutes**; and that the contact time is **less than 1 hour**. The specification fully supports these amendments. The specification states:

*"Carbonate, such as calcium carbonate, CaCO<sub>3</sub>, is frequently present in water containing high natural arsenic levels. Even tap water can contain significant concentrations of carbonate (e.g., 150 ppm in Albuquerque tap water)." See p. 5, lines 17-19.*

Support for limiting the contact time to being **greater than 2 minutes** can be found in Tables 1 and 2. Support for limiting the contact time to being **less than 1 hour** can be found at page 7, lines 11-12.

Neither Galbacs et al. publication or Schuster et al. teach or suggest that the contact time between magnesium oxide/hydroxide and water with carbonate be limited to being **less than 1 hour**. The reason that they don't teach this restriction on contact time is the fact that they don't appreciate or understand the problem of undesirable arsenic release when magnesium hydroxide (with adsorbed arsenic)

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converts to magnesium carbonate, when there is a significant concentration of carbonate present in the water. Since the references cited by the Office do not teach all of the elements of claim **32**, as currently amended, the rejection under 35 USC 102(b) cannot be supported and should be withdrawn.

Accordingly, claim **32** is now in condition for allowance.

### **New Claims**

#### **New Claim 66**

New claim **66**, which depends from **32**, was added to further limit the contact period of time to being less than 30 minutes. Support for limiting the contact time to being **less than 30 minutes** can be found at page 7, lines 11-12. As presented above, neither Galbacs et al. publication or Schuster et al. teach or suggest that the contact time between magnesium oxide/hydroxide and water with carbonate be limited to being **less than 30 minutes**.

Accordingly, new claim **66** is now in condition for allowance.

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### Conclusion

Applicants have responded to each and every objection and rejection, and urge that the claims as presented and currently amended, including new claim 66, are now in condition for allowance. Applicants request expeditious processing to issuance.

The Office is authorized to charge **Deposit Account # 19-0131** for any necessary fees regarding this response, including \$ 50 for one additional new claim, and \$ 790 for a RCE, and \$ 120 for a 1-month extension of time.

Respectfully submitted,



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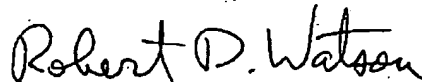
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